Abstrakt k bakalářské prácí - Anglický jazyk
Synthesis and Characterization of Topological crystalline insulators in the SnTe material class

Jakub Chovanec

In this work we prepared series of single crystal samples $Pb_xSn_{1-x}Te$ and $Pb_xSn_{1-x}Se$. These materials are quite popular last few years, after they were predicted at first by [?] and then characterized by [?] as topological crystaline insulators (TCI). TCI is a quantum state of crystals, in which symetry causes existence of the metal states on the surface. Sampmles had been prepared from molten flux and by using Bridgman method. Homogenity and purity of single crystals had been determined. Compounds $Pb_xSn_{1-x}Te$ crystalized in cubical structure and were defeined as Fm-3m space group, $Pb_xSn_{1-x}Se$ in orthorombic structure, Pnma space group.